



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,049	03/28/2001	Carl K. Abrahamson	TA 014	3090
22948	7590	01/14/2005		
MARSTELLER & ASSOCIATES P O BOX 803302 DALLAS, TX 75380-3302			EXAMINER GARCIA OTERO, EDUARDO	
			ART UNIT 2123	PAPER NUMBER

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,049	ABRAHAMSON, CARL K.	
	Examiner	Art Unit	
	Eduardo Garcia-Otero	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION: Final Action

Introduction

1. Title is: DYNAMICALLY ADAPTABLE DIGITAL ARCHITECTURE SYSTEM.
2. First listed inventor is: ABRAHAMSON.
3. US nonprovisional application was filed 3/28/2001, and no earlier priority is claimed.
4. Claims 1-2, and 4-12 are pending.
5. Applicant's Amendment was received 12/10/04.

Index of Important Prior Art

6. Sample refers to US patent 5,329,470.
7. Acres refers to US patent RE37,885 E.

Definitions

8. **“Emulate”** is defined as “To represent a system by a model that accepts the same inputs and produces the same outputs as the system represented. For example, to emulate an 8-bit computer with a 32 bit computer. See also; simulate.” The Authoritative Dictionary of IEEE Standards and Terms, Seventh Edition, by IEEE Press, ISBN 0-7381-2601-2, 2000.
9. **“EPROM”** is defined as “erasable programmable red-only memory”, which in turn is defined as “... A type of programmable read-only memory that can be erased and reprogrammed using ultraviolet light”. The Authoritative Dictionary of IEEE Standards and Terms, Seventh Edition, by IEEE Press, ISBN 0-7381-2601-2, 2000.
10. **“Firmware”** is defined as “The combination of a hardware device and computer instructions and data that reside as read-only software on that device. Notes: 1. This term is sometimes used to refer only to the hardware device or only to the computer instructions or data, but these meanings are deprecated. 2. The confusion surrounding this term has led some to suggest that it be avoided altogether.” The Authoritative Dictionary of IEEE Standards and Terms, Seventh Edition, by IEEE Press, ISBN 0-7381-2601-2, 2000.

Applicant's Remarks

11. 35 USC 112 FIRST PARAGRAPH ENABLEMENT. Applicant has cancelled claim 3, thus the prior enablement rejections are withdrawn.

Art Unit: 2123

12. 35 USC 112 SECOND PARAGRAPH INDEFINITENESS. The prior indefiniteness rejections are withdrawn due to Applicant's amendments and assertions at Remarks pages 3 and 4.
13. PRIOR ART REJECTIONS. Applicant has amended the independent claims, and presented new claims. Thus, new rejections are provided below.
- 14.
- 15.

35 USC § 112-Second Paragraph-indefinite claims

16. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
17. Claims 1-2, and 4-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
18. INCONSISTENT TERMINOLOGY. There appears to be inconsistent terminology, whereby many different terms may be referring to the same element of the machine. The inconsistent terms in claim 1 are: electronic component, external electronic master system, configurable electronic circuitry means, known electronic system subcomponent, known electronic master system, configurable electronic circuit, configuration controller element, configuration controller. Please amend to use consistent terminology throughout all of the claims. Also note and contrast with the terminology in claim 8: electronic circuit module, known electronic circuit, etc.
19. The Examiner suggests that amending claim 1 (currently amended) to explicitly and separately list each machine element may assist in overcoming the rejections, and may assist in accelerating the prosecution of the present application. Please see 37 CFR 1.75(i) which states "Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation". Also see MPEP 608.01(m) "There may be plural indentations to further segregate subcombinations or related steps".
20. Specifically, the Examiner suggests a major indentation for each element, and then sub-indentations for sub-elements.

Art Unit: 2123

21. Claims 2, and 4-12 are rejected under are rejected for the same reasons as claim 1 (currently amended).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
23. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: Determining the scope and contents of the prior art. Ascertaining the differences between the prior art and the claims at issue. Resolving the level of ordinary skill in the pertinent art. Considering objective evidence present in the application indicating obviousness or nonobviousness.
24. Claims 1-2, 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable.
25. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sample US patent 5,329,470 in view of Acres US patent RE37,885 E.
26. Independent claim 1 (currently amended) is an “electronic” or “machine” claim with 5 limitations, numbered by the Examiner for clarity.
27. In claim 1 limitation [1], **“configurable electronic circuitry means for emulating an output signal from a respective known electronic system sub-component of a known electronic master system, the output signal corresponding to a function of the electronic system subcomponent”** is disclosed by Sample Abstract “system for physical emulation of electronic circuits... an array of programmable gate elements”.
28. In claim 1 limitation [2], **“an input/output interface for electronically mating the configurable electronic circuit to the electronic master system”** is disclosed by Sample FIG 1A “INTERFACE”.
29. In claim 1 limitation [4], **“configures the configurable electronic circuit to emulate a selected function and operational characteristics of the known electronic system sub-component”** is disclosed by Sample FIG 1A “CONFIGURATION UNIT”.

Art Unit: 2123

30. In claim 1 limitation [5], **“the configurable electronic circuit has an output adaptable as an input to the electronic master system to replicate and replace functions of the known electronic system sub-component acting in the electronic master system”** is disclosed by Sample FIG 1A “EMULATION ARRAY”.
31. The remaining limitation is not expressly disclosed by Sample.
32. In claim 1 limitation [3], **“a configuration controller element electronically connectable with the configurable electronic circuit, the configuration controller determines the location of the configurable electronic circuit in the electronic master system”** is disclosed by Acres column 17 lines 1-18 “identifies... configuration number... a unique identification number... binary configuration number”. Note that Specification page 6 lines 18-26 state “determine the location... such as automatic slot detection, or by reading a binary configuration number set using a multiplexed switch (manual slot identification)”.
33. At the time the invention was made, it would have been obvious to a person
34. of ordinary skill in the art to use Acres to modify Sample. One of ordinary skill in the art would have been motivated to do this in order to uniquely identify each circuit.
35. Claims 2, 4-7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sample US patent 5,329,470 in view of Acres US patent RE37,885 E.
36. Claims 2-7 and 11 depend from independent claims 1 (currently amended) with the following additional limitations.
37. In claim 2, **“the configurable electronic circuit and the input/output interface are mounted with a circuit card assembly”** is disclosed by Sample column 5 line 45 “circuit card”.
38. In claim 4, **“a processor means external to the configurable electronic circuit to load instructions onto the configurable electronic circuit”** is disclosed by Sample FIG 1A “CONFIGURATION UNIT” and “DATA ENTRY WORKSTATION”.
39. In claim 5, **“the configurable electronic circuit further includes memory means for storing electronic information”** is disclosed by Sample FIG 1A “CONFIGURATION UNIT” and “MEMORY DEVICES”.
40. In claim 6, **“the configurable electronic circuit includes digital logic circuitry”** is disclosed by Sample FIG 1A “EMULATION ARRAY”.

Art Unit: 2123

41. In claim 7, “a microprocessor means for executing an emulator program of instructions from the known electronic system subcomponent” is disclosed by Sample FIG 1A “CONFIGURATION UNIT” and “LOGIC ANALYZER/PATTERN GENERATOR”.
42. MOTIVATION FOR CLAIMS 2, 4-7 AND 11. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Acres to modify Sample. One of ordinary skill in the art would have been motivated to do this in order to uniquely identify each circuit.
43. Claims 8-10 and 12 are “method” claims, and are rejected for the same reasons as the “machine” claims above.

Conclusion

44. All pending claims stand rejected.
45. The Examiner makes the following suggestions in the interests of overcoming pending rejections and accelerating prosecution of the application:
46. First, please use unique and consistent terminology for each machine element. Note MPEP 2173.
47. Second, please explicitly and separately list each machine element. Note 37 CFR 1.75(i) which states “Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation”.
48. Third, please explicitly and separately list sub-elements which may comprise each element. Note MPEP 608.01(m) “There may be plural indentations to further segregate subcombinations or related steps”.
49. Fourth, please amend the process claims in similar fashion.

Response to Amendments-FINAL OFFICE ACTION

50. Applicant's amendments necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire

Art Unit: 2123

on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

51. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 571-272-3711. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 8:00 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at 571-272-3761. The fax phone number for this group is 703-872-9306.

* * * *



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER